

TOLMACHEVA, Z.I.; USPENSKAYA, A.D.

Eight All-Union Interdepartmental Conference on Problems of the
Theory and Practice of the Interpretation of Aerial Photographs.
Geod.i kart. no.3:63-68 Mr '62. (MIRA 15:12)
(Photographic interpretation--Congresses)

YEREMENKO, V.N.; TOLMACHEVA, Z.I.

Triangulation of the system titanium - carbon - nickel. Porosh. met.
1 no.2:21-29 Mr-Apr '61. (MIRA 15:5)

1. Institut metallokeramiki i spetsial'nykh splavov AN USSR.
(CERAMIC METALS) (PHASE RULE AND EQUILIBRIUM)

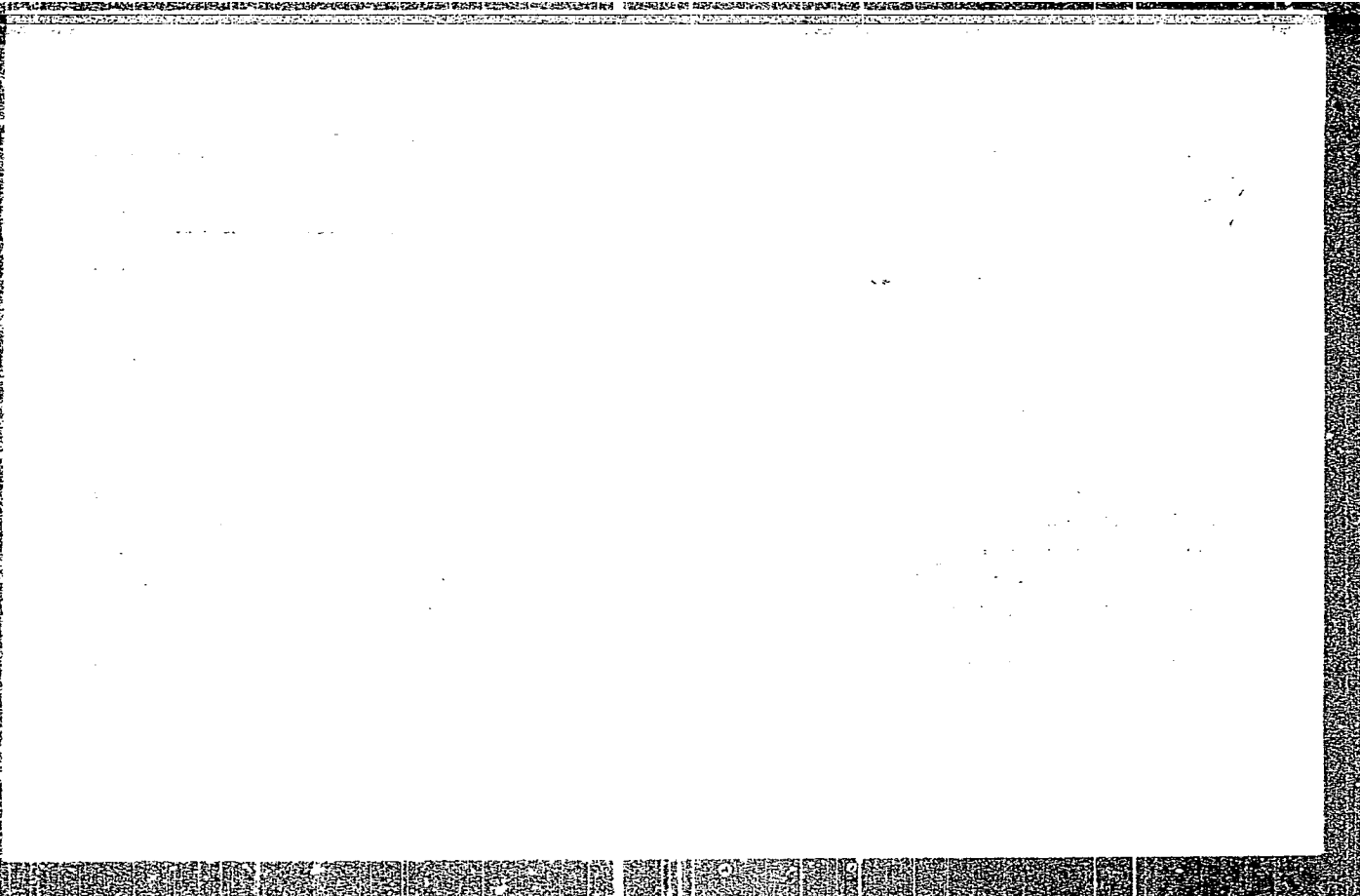
YEREMENKO, V.N.; TOLMACHEVA, Z.I.

Triangulation of the system titanium - carbon - chromium. Porosh. met.
1 no.2:30-34 Mr.-Ap '61. (MIRA 15:5)

1. Institut metallokeramiki i spetsial'nykh splavov AN USSR.
(CERAMIC METALS) (PHASE RULE AND EQUILIBRIUM)

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ASSOCIATION Institut problem materialioveredulya on voprosy

Card 2/2

YEREMENKO, V.N.; TOLMACHEVA, Z.I.

Solubility of chromium and chromium carbides in solid titanium
carbide. Porosh. met. no.4:31-36 J1-Ag '61. (MIRA 16:5)

1. Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.
(Solutions, Solid) (Chromium carbide) (Titanium carbide)

ABOL'YAN, A.M.; TOLMACHEVA, Z.I.

Technique of revising topographic maps. Geod. i kart. no.7:52-54 J1 '64.
(MIRA 17:12)

OPTIROVA, L.A.; TOLMACHEVA, Z.M.

Veneering form bars in pneumatic gluing presses. Der.prom. 8
no.2:21-22 F '59. (MIRA 12:2)

1. Saratovskaya mebel'naya fabrika.
(Veneers and veneering)

TOLMACHEVA, Z. M.

Vertical Belt Grinding Machine with a Movable Table. Leka Promishlenost
(Light Industry), #12:41:Dec. 1955

TOLMACHEVSKAYA, O.A. (Moskva)

Chromosomal diseases; a review of the literature. Akush. i gin.
no.2:32-38 '65. (MIRA 18:10)

BURSHTAR, M.S.; TOLMACHEVSKIY, A.A.

New data on the abyssal structure of the Ararat Plain in
the Armenian S.S.R. Dokl. AN SSSR 165 no.5:1135-1138 D
'65. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut. Submitted June 26, 1965.

PYSHKIN, Boris Andreyevich, prof.; RUSAKOV, Sergey Vasil'yevich; MAKSIMCHUK, Vladimir Lukich; SOKOL'NIKOV, Yuriy Nikolayevich. Prinimel uchastiye: DOKUKIN, G.B.. ~~TOLMACHOV, A.B.~~, retsenzent; TSIMBERG, I.Ye., retsenzent; PECHKOVSKAYA, O.M., red.; MATVEY-CHUK, A.A., tekhn.red.

[Problems in planning channel deepening cuts] Voprosy proektirovaniia dnouglubitel'nykh prorezei. Pod red. B.A.Pyshkina. Kiev, Izd-vo Akad.nauk USSR, 1959. 157 p. (MIRA 12:12)

1. Chlen-korrespondent AN USSR (for Pyshkin). 2. Glavnyy inzhener Dneprovskogo basseynovo upravleniya puti (for Tolmachov). 3. Nachal'nik otdela vodnykh putey Ukgiprorchtransa (for TSimberg). (Rivers--Regulation)

TOLMACHOV, I.M.; BOGDAN, I.K. [Bohdan, I.K.]; YASNIKOVA, O.O.

Respiration of wintering plants. Nauk. pratsi VASHN 17 no.12:
30-33 '60. (MIRA 16:7)

(Plants—Respiration)
(Plants. Effect of cold on)

SOV/102-58-3-9/10

AUTHORS: Shukaylo, E.M. (Shutkaylo, Ye.M.) and Tolmachov, O.B.

TITLE: A Review of Research on the Scientific Foundations of Process Automation for 1957 (Pidsumky roboty po kompleksnyi problemi "Naukovi osnovy avtomatyzatsii vyrobnychkh protsesiv" za 1957 rik).

PERIODICAL: Avtomatika (Kyiv), 1958, Nr.3, pp.102-4 (USSR)

ABSTRACT: The review relates to work done by the Institutes of Ukrainian Academy of Sciences, which is coordinated by a Commission of the Technical Sciences Division. Half the review relates to the Institute of Electrotechnology; work has been done on program control for metal working machinery, and a digital lathe control developed; improvements required to servos have led to a device for recording amplitude and phase characteristics being developed. Many instruments have been developed; semiconductor devices have been applied. Automation has been extended in coal-mining and other fields. The Institute of Machine Design and Automatics has worked on telemetry problems and noise stability topics. The Gas

Card 1/2

SOV/102-58-3-9/10
A Review of Research on the Scientific Foundations of Process
Automation for 1957.

Research Institute has worked on automatic regulators for gas-fired boilers, gas-producing ovens and gas compressors. The Computing Centre has extended its work on high speed electronic computers, particularly the "Kyiv" (3000-4000 operations/sec) and a machine for solving systems of linear algebraic equations with many unknowns. Some aspects of regulator, computer etc. production are also reviewed; certain items are to be produced in much greater quantities in future.

Card 2/2

SHUKAYLO, Ye.M.; TOLMACHOV, O.B.

Review of research on the comprehensive problem "Scientific
principles of automation of production process" during 1957.
Avtomatyka no.3:102-104 '58. (MIRA 11:12)
(Automation)

TOLMACHOV, Yu.

News from a district. Sil'.bud. 9 no.10:14 0 '59.
(MIRA 13:3)

1. Sotrudnik rayonnoy gazety "Novobuz'ka pravda," Novobuz'kiy rayon, Nikolayevskoy oblasti.
(Novyy Bug District--Building)

TOLMADZHEV, K.G., red.; TARASOV, I., otv. za vypusk; ZARIN', K.
[Zarins, K.], tekhn. red.

[Flourishing of the national economy of Soviet Latvia] Rastsvet
narodnogo khoziaistva Sovetskoi Latvii; sbornik statei. Pod
red. K.G. Tolmadzheva. Riga, 1958. 285 p. (MIRA 16:2)

1. Latvian S.S.R. Valsts zinatniski tehniska komiteja.
(Latvia--Economic conditions)

NOVACEK, A.; VONDRACEK, B.; TOIMAN, J.

Sulfonamides. VII. Sulfamethoxydine. Cesk. farm. 14 no. 2:72-74
F '65.

1. Chemopharma, n.p., Usti nad Labem.

36315
Z/057/62/000/002/013/015
E192/E382

9.2583

AUTHOR: Tolman, J.

TITLE: Recording the frequency deviation of two oscillators

PERIODICAL: Československý časopis pro fysiku, no. 2, 1962,
175 - 181

TEXT: A method of recording the frequency deviation between two oscillators as a function of time is described. One of the oscillators is a standard of known stability, which is defined on the basis of comparing it with other standards. The method is based on the assumption that at least one of the two oscillators is controlled by a quartz crystal of a type such that its resonance frequency can be linearly varied by a direct voltage applied to its electrodes. In fact, the crystal used for this purpose had a GT cut, a frequency of 100 kc/s and its voltage coefficient was 1×10^{-8} per 1 V. The measurement system is illustrated in Fig. 2, where the oscillator O with the discriminator D forms a standard phase synchronisation

Card 1/B

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E192/E382

Recording the frequency deviation...

circuit. The phase discriminator compares the phase of the investigated signal with the phase of the oscillator with the GT crystal. The discriminator voltage v_D is directly

proportional to the frequency difference, $f_1 - f_K$. In order to achieve high sensitivity an automatic voltage compensator

is introduced between the output of the discriminator and the electrodes of the crystal. This compensator consists of a potentiometer, an auxiliary voltage source v_D and a motor M .

By means of the relay R , the motor adjusts the potentiometer in such a way that the output voltage v_B of the discriminator

is reduced to null. The voltage on the potentiometer v_M is therefore proportional to the frequency deviation $f_1 - f_K$ as

a function of time. This voltage waveform thus represents the long-term frequency stability and its record gives a direct picture of the frequency deviation due to ageing. If the accuracy of the compensator is 10 mV, the frequency deviation

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Recording the frequency deviation... Z/037/62/000/002/013/015
E192/E382

can be determined with an accuracy of 1×10^{-10} . The operation of the measurement system of Fig. 2 (which is regarded as a servo system) is analyzed in some detail and a formula for its transient response is derived. The above method is primarily suitable for measurement of the short-term stability of an oscillator but it can also be used for the investigation of long-term stability. The main disadvantage of the method is that the range of measurement is limited to $(1 \text{ to } 2) \cdot 10^{-6}$, since the polarization of the GT crystal by a voltage higher than 100 V is not possible. Secondly, the frequency of the investigated oscillator should not deviate by more than 1×10^{-4} from the frequency of the standard. However, it should be pointed out that the above method was primarily devised for comparing the oscillators with a nominal frequency of 100 kc/s. There are 3 figures.

ASSOCIATION: Ústav radiotechniky a elektroniky ČSAV, Praha
(Institute of Radio-engineering and
Electronics of the ČSAV, Prague)

SUBMITTED: February 20, 1961
Card 3/4

TOLMAN, V.; VERES, K.

Synthesis of the 2-bromine-3-fluoropropionic acid-methylester
and some of its reactions. Coll Cz Chem 28 no:2:421-425
F '63.

1. Biologisches Institut, Tschechoslowakische Akademie der
Wissenschaften, Prag.

Tolmashov, N. D.

AID P - 2808

Subject : USSR/Chemistry

Card 1/1 Pub. 119 - 4/7

Author : Tolmashov, N. D. (Moscow)

Title : Electrochemical theory of corrosion and methods of increasing the corrosion resistance of metallic alloys

Periodical : Usp. khim. 24, 4, 453-470, 1955

Abstract : Only the heterogeneous electrochemical mechanism of corrosion is reviewed. The resistance to corrosion may be increased by introducing some components to form more protective coatings and by decreasing the cathodic and anodic activities of the alloys. Eleven diagrams, 2 tables, 41 references, 35 Russian (1910-1954).

Institution : None

Submitted : No date

TOIMACHEVSKAYA, O.A.

Treatment of cracked nipples with penicillin aerosols. Akush. gin.
no.3:43-44 May-June 1953. (GIML 25:1)

1. Of the Institute of Obstetrics and Gynecology (Director -- L. G.
Stepanov), Ministry of Public Health USSR.

TOLMAN, V.

CZECHOSLOVAKIA

TOLMAN, V.; VERES, K.

CSSR

Biological Institute, Czechoslovak Academy of Sciences, Prague (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 2, 1963
pp 421-425

"Synthesis of 2-Brom-3-Fluorpropionacidmethylester and Some of Its Reactions"

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CA
TOLMACHEVSKIY, I. I.

Precooling of air in oxygen plants. K. S. Butkovich and I. I. Tolmachevskii. *Astogennoe Delo* 1946, No. 5/6, 35-7.—Compressed air in air-decompn. plants is cooled by passing it through water, which is cooled, in turn, by evapn. Evapn. is effected by discharging dry N into the water. The heat balance of such a cooling system is presented.

M. Hosh

TOLMAN, V.; VERES, K.

Synthesis and some reactions of 2-fluorine-3-hydroxypropionic acid ethyl esters. Coll Cz Chem 29 no.1:234-238 Ja'64

1. Mikrobiologisches Institut, Tschechoslowakische Akademie der Wissenschaften, Prag und Isotopenlaboratorium der Biologischen Institute, Tschechoslowakische Akademie der Wissenschaften, Prag.

SKALIKOVA, Olga; TOLMAN, Vladimir; BARTA, Jiri; MECHURA, Bohumil

Problems in determination of amino acids in the cerebrospinal fluid. Sborn. lek. 64 no.6:165-171 Je '62.

1. Psychiatricka klinika fakulty vseobecneho lekarstvi University Karlovy, predh.osta prof. dr. V. Vondracek Biologicky ustav CSAV, reditel akademik I. Malek.
(CEREBROSPINAL FLUID chem) (AMINO ACIDS cerebrospinal fluid)

POPOVSKAYA, A. Ya., starshiy tovaroved; TOLMATSKIY, I.M., starshiy master

Variety of electric home appliances. Vest.elektroprom. 31
no.1:4-7 Ja '60. (MIRA 13:5)

1. Starshiy tovaroved Gosudarstvennogo universal'nogo magazina
(for Popovskaya). 2. Starshiy master Gosudarstvennogo
universal'nogo magazina (for Tolmatskiy).
(Household appliances, Electric)

TOLMACHYEV, I. M.

20620 TOLMACHYEV, I. M. Issledovaniye fotosinteza kalorimetriceskim metodom. Sbornik .
nauch, rabot (vsesoyuz. nauch - issled. in-t sakhar. svekly). Kiyev-Khar'kav, 1948, s. 107-14

SO: LETOPIS ZHURNAL STATEY - Vol. 28 - Moskva - 1949

TOLMAN, J.

Recording the frequency deviations of two oscillators. Cs cas
fys 12 no. 2:175-181 '62.

1. Ustav radiotechniky a elektroniky, Ceskoslovenska akademie
ved, Praha.

TOLMANOVA, A.M.

Data from catamnesic observations of children who suffered
intercranial trauma at birth. Zdrav. Kazakh. 21 no. 8: 40-43
'61. (MIRA 14:9)

1. Iz kafedry gosspital'noy pediatrii (zav. - professor A.I. Avenirova)
Kazakhskogo meditsinskogo instituta.
(BIRTH INJURIES) (BRAIN---WOUNDS AND INJURIES)

EXCERPTA MEDICA Sec 4 Vol 12/1 Med. Micro. Jan 59

340. ACTIVE AND PASSIVE MOUSE PROTECTION TESTS USED IN THE
ASSAY OF TYPHOID VACCINES - Tolnai G. and Barsy G. State Inst.
of Hyg., Budapest - ACTA MICROBIOL. ACAD. SCIENT. HUNG. 1957. 4/3
(227-236) Tables 6

A comparison of experimental methods of active mouse protection tests for the
assay of typhoid vaccines is described. The more extensively used method involv-
ing immunization with a fixed dose and infection by graded doses, proved to be
less reliable as compared to immunization by graded doses and infection by a
fixed dose. By the former method the differences in protective value of vaccines
of various origin were not truly evaluated and highly variable results were obtained
for the same vaccine. The latter method proved to be an adequate measure, the
results being easily reproduceable.

Lányi - Budapest (IV, 17)

TOLMASSKAYA, E. S.; GUSEL'NIKOVA, K. G.; GUSEL'NIKOV, V. I.; VORONIN, L. G.
(Moskva)

Ob izmeneniyakh funktsional'nogo sostoyaniya nespetsificheskikh i
spetsificheskikh sistem pod vliyaniem aminazina

report submitted for the First Moscow Conference on Reticular Formation,
Moscow, 22-26 March 1960.

TOLMASSKAYA, E. S.

42630. K Voprosu O Korkovoy Lokalizatsii Vistseral'Nykh Retseptornykh Funktsiy. 'Byulleten' Ekspelm. Biologii I Meditsiny, 1948, No. 12, No. 3 413-16.

TOLMASSKAYA E.S., IRGER, I.M. and KOREISHA L.A.

6289. Irger I.M. Koreisha L.A. and Tolmasskaia E.S. Electrical potentials of the human cerebellum Problem of Neurosurgery, Moscow 1949, 5 (34-38) Graphs 4

The use of skin electrodes for registration of the electrical activity of the cerebellum does not give reliable results, as the action potentials of the muscles and the electrical activity of the occipital part of the cortex are picked up at the same time. In order to register the electrical activity of the cerebellum exclusively, use was made of insulated wire electrodes with only the point exposed. Each of these thin wires was inserted with the aid of an injection needle - serving as trocar - through the skin and muscles until it made contact with the skull; local anaesthesia was used. In this way it was possible to register typical electrocerebellograms from human subjects and animals. Three frequencies were detected: 170-220 per sec.; 30-50 per sec.; 6-8 per sec. Particulars are given of 2 clinical cases in which a tumour in a cerebellar hemisphere was diagnosed with the aid of this method.

Ten Cate - Amsterdam

SO: Excerpta Medica - Section II Vol. III No. 11

IRGER, I.M.; KOREISHA, L.A.; TOLMASSKAYA, E.S.

Investigation on the electric activity of phylogenetically different segments of the cerebellum in man and animal. Fiziol.zh.SSSR 37 no.3: 273-282. May-June 51. (GLML 21:1)

1. Physiological Laboratory and the Third Clinical Division of the Institute of Neurosurgery imeni Academician N.N.Burdenko of the Academy of Medical Sciences USSR, Moscow.

SEREYSKIY, M.Ya.,; TOLMASKAYA, E.S.,; GOLODETS, R.G.,; SAMTER, N.F.

Treatment of schizophrenia with aminazine. Zhur. nevr. i psikh. 56
no.2:155-161 '56. (MLRA 9:5)

1. Gosudarstvennyi institut psikiatrii (dir.-dotsent D.Ye. Melekhov)
Ministerstva zdravookhraneniya RSFSR i psikhonevrologicheskaya
bol'nitsa imeni P.B. Gannushkina (glavnyy vrach V.N. Rybalka)

(SCHIZOPHRENIA, therapy,
chlorpromazine (Rus))

(CHLORPROMAZINE, therapeutic use,
schizophrenia (Rus))

IRGER, Iosif Markovich; KOREYSHA, L.A.; TOLMASSKAYA, E.S.

[Electrical activity of the human cerebellum under normal and pathological conditions] Elektricheskaya aktivnost' mozghechka cheloveka v norme i patologii. Moskva, Medgiz, 1959. 241 p. (MIRA 13:2)

(ELECTROPHYSIOLOGY)

(CEREBELLUM)

TOLMASSKAYA, E.S.; DYKMAN, L.M. [deceased]; ARSHAVSKIY, V.V.

Mechanism of the action of reserpine. Trudy Gos. nauch.-issl.
inst. psikh. 42:129-138. '65. (MIRA 18:9)

1. Otdeleniye patofiziologii vysshey nervnoy deyatel'nosti
(zav.- prof. E.S. Tolmasskaya) i laboratoriya elektrofiziologii
Gosudarstvennogo nauchno-issledovatel'skogo instituta psikiatrii
Ministerstva zdravookhraneniya RSFSR.

TOLMASSKAYA, E.S.; DYKMAN, L.M.

Role of the reticular formation in conducting interceptive
impulses. Zhur.vys.nerv.deiat. 12 no.1:161-168 Ja-F '62.
(MIRA 15:12)

1. Electrophysiology Laboratory, Institute of Psychiatry,
R.S.F.S.R. Ministry of Health, Moscow.
(ELECTROENCEPHALOGRAPHY) (REFLEXES)

TOLMASSKAYA, E.S.; APSHAVSKIY, V.V.

Electrophysiologic analysis of the central effect of reserpine.
Zhur. nevr. i psikh. 64 no.6:903-910 '64. (MIRA 17:12)

1. Laboratoriya elektrofiziologii (zaveduyushchiy - prof. E.S.
Tolmasskaya) Instituta psikhiiatrii (direktor - prof. D.D. Fedotov)
Ministerstva zdравookhraneniya RSFSR, Moskva.

TOLMASSKAYA, E.S., doktor med.nauk

Pathophysiological characteristics of a geriopathic-hypochondriacal syndrome in cerebral atherosclerosis. Trudy Gos. nauch-issl.inst.psikh. 25:218-227 '61. (MIRA 15:12)

1. Elektroфизиологическая лаборатория (зав. - доктор мед. наук Е.С.Толмасская) и клиника сосудистых психозов (зав. - проф. В.М.Баншчиков) Государственного научно-исследовательского института психиатрии Министерства здравоохранения РСФСР.
(CEREBRAL ARTERIOSCLEROSIS) (HYPOCHNDRIA)(ELECTROENCEPHALOGRAPHY)

TOLMASSKAYA, E.S.; GOLODETS, R.G.

Electroencephalographic characteristics of the functional state of the brain in involutional psychoses. Zhur. nevr. i psikh. 62 no.1: 125-131 '62.
(MIRA 15:2)

1. Institut psikhiiatrii (dir.-prof. V.M.Banshchikov) Ministerstva zdavookhraneniya RSFSR, Moskva.
(ELECTROENCEPHALOGRAPHY) (PSYCHOSES)

VORONIN, L.G.; TOLMASSKAYA, E.S.; GUSEL'NIKOVA, K.G.; GUSEL'NIKOV, V.I.

Electrophysiological studies on the mechanism of action of aminazine.
Zhur.nevr.i psikh. 61 no.2:208-217 '61. (MIRA 14:6)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut psikhiatrii
(dir. - prof. V.M.Banshchikov) Ministerstva zdravookhraneniya i
kafedra vysshey nervnoy deyatel'nosti (zav. - prof. L.G.Voronin)
Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova.
(CHLORPROMAZINE) (ELECTROENCEPHALOGRAPHY)

TOIMASSKAYA, E.S.; TITAYEVA, M.A.

Mechanism of the action of aminazine. Trudy Gos. nauch.-issl.
psikhonevr. inst. no.20:269-275 '59. (MIRA 14:1)

1. Institut psikhiatrii Ministerstva zdoravookhrananiya RSFSR
(dir. - prof. V.M. Banshchikov), Moskva.
(CHLORPROMAZINE) (ELECTROPHYSIOLOGY)

SYRKIN, V.G. (Moskva); TOLVASSKIY, I.G. (Moskva); Pri uchastii FRIDENBERG,
I.R. (Leningrad)

Effect of the duration of grinding of iron carbonyl powders
on their electromagnetic parameters. Porosh. met. 5 no.7:
13-18 J1 '65. (MIRA 18:8)

TOLMASSKIY, I.S.

Electrometric determination of the demagnetization time of
glyptal resins. Zav. lab. 21 no. 2: 207-209 '55. (MLRA 8:6)
(Resins, Synthetic)

ACC NR: AP6033449

SOURCE CODE: 01/0412/16/000/018/0032/0032

INVENTOR: Syrkin, V. G.; Tolmasskiy, I. S.; Volkov, V. L.; Fridenberg, A. E. (Deceased)

ORG: None

TITLE: A method for producing highly dispersed carbonyl iron powder. Class 12, No. 185864

SOURCE: Izobret prom obraz tov zn, no. 18, 1966, 32

TOPIC TAGS: carbonyl iron, iron powder, powder metal production

ABSTRACT: This Author's Certificate introduces a method for producing highly dispersed carbonyl iron powder by thermal dissociation of iron pentacarbonyl. The yield is increased and a product with a low degree of carburization is obtained by sectional inlet and outlet of the heating gas along the height of the equipment from top to bottom to produce "falling" temperature conditions.

SUB CODE: 11/ SUBM DATE: 09Sep61

13/

Card 1/1

UDC: 546.725.07

TOIMASSKIY, IOSIF SEMENOVICH, inzh.

Permeability and losses of magnetodielectrics based on carbonyl
iron powders. Izv. vys. ucheb. zav.; elektromekh. 4 no.6:3-
18 '61. (MIRA 14:7)

(Cores (Electricity)) (Magnetic materials)

VOLKOV, V.L.; TOLMASSKIY, I.S.; FRIDENBERG, A.E.

Carbonyl iron-powders. Izv. AN SSSR. Ser. fiz. 25 no.12:1483-1486
D '61. (MIRA 14:12)

(Carbonyls)

TOIMASSKIY, I.S.; FRIDENBERG, A.E.

Production of new-type ferroplastics based on carbonyl powders,
and electromagnetic properties of these plastics. Plast.massy
no.12:15-19 '61. (MIRA 14:12)

(Carbonyl groups)
(Ferromagnetic substances)

FRIDENBERG, A.E. [deceased]; SYRKIN, V.G. (Moskva); TOLMASSKIY, I.S. (Moskva);
FRAYMAN, R.S. (Moskva)

High dispersion iron carbonyl powder for high frequency magnetic
dielectrics. Porosh. met. 3 no.1:33-41 Ja-F '63. (MIRA 16:3)
(Metal powders) (Iron carbonyl) (Dielectrics)

L 46133-66 EWP(e)/EWT(m)/EWP(t)/ETI/EWP(k) LJP(a) JD

ACC NR:

AP6025936

SOURCE CODE: UR/0226/66/000/007/0038/0044

AUTHOR: Syrkin, V. G. (Moscow); Tolmasskiy, I. S. (Moscow); Petrova, A. A. (Moscow)

ORG: None

TITLE: Correlation between electromagnetic and physicochemical properties of powdered carbonyl iron

SOURCE: Poroshkovaya metallurgiya, no. 7, 1966, 38-44

TOPIC TAGS: electromagnetic property, carbonyl iron, iron powder, magnetic permeability, phase diagram, phase transition, *physical chemistry property*

ABSTRACT: The authors study the electromagnetic parameters of powdered carbonyl iron as a function of physicochemical properties. These electromagnetic characteristics are: initial permeability, hysteresis loss, frequency loss, additional losses and the temperature coefficient of initial permeability at frequencies up to 0.5 Mc, or relative Q-factor, effective permeability and permeability temperature coefficient at radio frequencies. The authors correlate the electromagnetic parameters of carbonyl iron with the following factors: the effect of "bulb" structure of the powder particles; the effect of powder particle size; the effect of chemical composition of the powder. Electron microscopic analysis of the internal structure of carbonyl iron powder particles shows that the number of concentric layers in the particle plays an

Cord 1/2

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ACC NR: AP6025936

important role in determining the electromagnetic properties of carbonyl iron powder, these properties improving with the number of layers in the powder particles at the same dispersion. The internal structure of carbonyl iron powder particles contains carbon, oxygen and nitrogen compounds. The form of the powder particles plays a major role in determining its electromagnetic properties. By changing the internal structure of the powder particles by appropriate technological means, its electromagnetic parameters can be considerably varied. Particle dimensions also affect the electromagnetic properties of the powder. Particle size primarily affects magnetic losses. If the dispersion of the powder is changed by technological means it is possible to produce a powder with given properties. The chemical composition of powdered carbonyl iron indicates a specific phase structure. The electromagnetic parameters of the powder in turn are a function of its state and phase transition. The technological factors which control the formation of carbonyl iron particles with given properties are considered. Orig. art. has: 6 figures, 5 tables.

SUB CODE: 11/ SUBM DATE: 02Aug65/ ORIG REF: 006/ OTH REF: 001

Conf 2/2

118

NAUMOV, Ivan Varfolomeyevich; TOIMASOV, Lev Aleksandrovich; OGURTSOV, A.A.,
inzhener, redaktor; KHITROW, P.A., tekhnicheskiy redaktor.

[Annual overhauling of freight cars at the depot in 4 hours; work
practice of the Lvov depot of the Main Lvov Railroad] Godovoi re-
mont gruzovykh vagonov v depo za 4 chasa; opyt raboty vagonnogo
depo L'vov Glavnyi l'vovskoi dorogi. Moskva, Gos.transp. zhel-dor
izd-vo, 1956. 24 p. (MLRA 9:5)

(Railroads--Freight cars--Maintenance and repair)

GUDKOVA, N.V.; LEVINA, E.I.; TOLMASOV, V.A.

Investigating carbide phases of tempered carbon steel. Fiz. met. i
metalloved. 4 no.3:500-504 '57. (MIRA 10:11)

1. Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut.
(Steel--Metallography) (Tempering)

AUTHOR: Tolomasov, V.A.

SOV/126-6-5-12/43

TITLE: Change in Phase Composition of the Stainless Steel
1Kh18N9T Under the Influence of Plastic Deformation
(Izmeneniye fazovogo sostava nerzhaveyushchey stali
1Kh18N9T pod vliyaniyem plasticheskoy deformatsii)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6,
Nr 5, pp 838 - 842 (USSR)

ABSTRACT: A portion of the γ -phase of austenitic Ni-Cr steels transforms to martensite during low-temperature deformation. Also, on quenching such steels, up to 30% hexagonal close packed θ -phase can form apart from austenite and martensite. Subsequent plastic deformation transforms the θ - and δ -phases into the α -phase. According to Cina (Ref 3), the θ -phase is a transition product of the $\gamma \rightarrow \alpha$ change. He determined the quantities of α and γ by X-rays and also by a magnetic method and came to the conclusion that the θ -phase was not ferromagnetic. However, this conclusion is based on unreliable experimental data and, therefore, the author of this paper decided to investigate the influence of plastic deformation on the phase composition of stainless steel, using the

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magnetic method, this being more reliable than X-rays at a high phase constituent dispersion. Magnetisation-temperature curves were plotted. The magnetisation was measured by a pondermotor magnetometer in a field of $H = 800 \text{ Oe}$, and at a gradient of $dH/dx = 2000 \text{ Oe/cm}$. The portion due to the α -phase in the summary magnetisation of the specimen ΔI_s , or ΔI_α , which is proportional to it, was determined by extrapolating the portions $I_s(T) \sim \varphi(T)$ of the curves to room temperature. The extrapolation was based on the relationship:

$$I_s(T^0)/I_s(\theta^0) = f(T^0/\theta^0)$$

which is common for all pure metals and their most important industrial alloys (Refs 4-6). A sheet of the stainless steel 1Kh18N9T of thickness 2 mm and composition 17.5% Cr, 8.76% Ni, 0.58% Ti, 0.125% C, 1.5% Mn, 0.9% Si, 0.03% P and 0.035% S was used in the investigation.

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Narrow strips cut out from sheet of the hot rolled steel

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Change in Phase Composition of the Stainless Steel 1Kh18N9T Under the Influence of Plastic Deformation

were plastically deformed by reduction between rolls. The dependence of the magnetisation of the steel and the degree of deformation is shown in Figure 1. The influence of temperature on the extent of magnetisation of the deformed steel was clarified. For the purpose, a series of specimens, after being deformed to the same extent ($\psi = 37\%$), were tempered for 30 minutes at temperatures varying between 200 and 700 °C. The relative change in magnetism of the tempered steel is shown in Figure 2. Tempering in the range 200 to 400 °C leads to a small increase in magnetism which appears to be due to formation of new portions of martensite as a result of redistribution of residual stresses. Heating above 500 °C causes a sharp drop in magnetism as a result of intensive transformation of the ferromagnetic phases into austenite (Ref 7). The relationship $I(T)$ for steel specimens deformed by 24 and 90% is shown in Figures 3 and 4. The magnetism of the specimen after rapid heating remains practically unaltered, i.e. the reduction in time required for the measurement of magnetism, enables the separation of ferro-

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Change in Phase Composition of the Stainless Steel 1Kh18N9T Under
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magnetic transformations of the metastable phase at its Curie point from the first order-phase change taking place simultaneously. As a result of these experiments, the following conclusions were arrived at: 1) in the stainless steel 1Kh18N9T two ferromagnetic phases, having Curie temperatures of 160 and 270 °C, respectively, form, apart from the α -phase (which has a Curie temperature of 600 °C), under the influence of plastic deformation (see Figures 3 and 4); 2) the number of ferromagnetic phases depends on the degree of deformation. However, there is practically no relationship between their volumes and degree of deformation; 3) in the reverse transformation of the ferromagnetic phases into austenite, which occurs during tempering of the deformed steel, their volume relationship is retained; 4) the summary volume of phases with Curie temperatures of 160 and 270 °C may reach 10%, which is several times greater than the possible volume of carbide phases in the steel under investigation. The latter leads to the assumption that phases with Curie

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temperatures of 160 and 270 °C are not chemical compounds
but allotropic forms of a solid solution which is analogous
to the α -phase. There are 5 figures, 1 table and 8
references, 4 of which are Soviet and 4 English.

ASSOCIATION: Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy
institut (Gor'kiy Physico-technical Research Institute)

SUBMITTED: November 19, 1956 (Initially)
February 12, 1957 (After revision)

Card 5/5

SOBOLEV, N.A.; SHEFOV, A.S.; TOLMASOVA, V.N.

Near-the-threshold spectral sensitivity region of silver-oxygen-cesium photocathodes and its relation to the structure of the photosensitive film. Izv.AN SSSR, Ser.fiz. 26 no.11:1370-1376
N '62. (MIRA 15:12)
(Cathodes) (Photomicrography) (Spectrum analysis)

TOIMASSKAYA, Esfir' Semenovna; MONAYENKOV, A.M., red.;

[Nervous mechanisms in the coordination of somatic and visceral functions of the organism] O nervnykh mekhaniz-
makh koordinatsii somaticheskikh i vistseral'nykh funktsii
organizma. Moskva, Meditsina, 1964. 166 p.

(MIRA 17:5)

9.2120(1147, 1331, 1482)
15.8340

21120
S/191/61/000/012/004/007
B110/B147

AUTHORS: Tolmasskiy, I. S., Fridenberg, A. E.

TITLE: Production methods and electromagnetic properties of new types of ferroplastics on the basis of carbonyl powders

PERIODICAL: Plasticheskiye massy, no. 12, 1961, 15 - 19

TEXT: The new ferroplastics had been synthesized by V. L. Volkov, Doctor of Technical Sciences, M. V. Ivashova, V. G. Sykrin, and the authors. Toroidal, ring-, and shield-shaped cores of ferroplastics are used. Iron carbonyl of the type Π (P) has the following percent composition: C = 0.6, N = 0.59, O = 0.95, Fe = 97.86; dispersity: $d_m = 2.3 \mu$. Soda glass was used as dielectric (ГОСТ 962-41 (GOST 962-41)), and for a previous insulation of iron particles, bakelite resin as adhesive (ГОСТ 901-56 (GOST 901-56)). For applying the first insulating layer, Fe powder is mixed with water-glass solution for 30 min at room temperature, then dried at 100°C. For applying the second layer, a mixture of Fe powder with alcoholic bakelite-resin solution is dried at 30°C. For determining the electromagnetic properties (Table 1), toroidal cores molded at

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10 tons/cm² and room temperature were subjected to a special heat treatment. Up to 100 kc the new ferroplastic now introduced into production is essentially superior to the old type. For radiotechnical cores used up to 20 Mc, the following ferroplastics differing in the amount of loss and the initial magnetic permeability were developed: (1) Ferroplastics on the basis of Fe carbonyl, not subjected to heat treatment, with double insulation: liquid glass and bakelite resin; (2) ferroplastics on the basis of Fe-Ni powder of the type H-50 (N-50) with double insulation: water glass and organosilicon resin. Percent composition of non-heat-treated (1): C = 0.85, N = 0.70, O = 0.90, Fe = 97.55; dispersity: $d_m = 2.5 \mu$. The cylindrical, toroidal, and shield-shaped cores were produced like high-frequency parts. The electromagnetic properties (Table 2) show the superiority of the new ferroplastics which are distinguished by a low increase of losses with increasing frequency. The spherical Fe-Ni particles of the type N-50 are insulated by water glass and bound by organosilicon resin. The electromagnetic parameters show high permeability and hysteresis losses. For this reason, the cores are recommended to be used in cases where nonlinear changes may be neglected. The ferroplastics used for shield-

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and rod-shaped radiotechnical cores for > 20 Mc, which contain Fe carbonyl obtained by gas separation, have the following percent composition: C = 0.83, N = 0.72, O = 0.94, Fe = 97.51; dispersity: $d_m = 1.3 \mu$. Synthetic method and insulation correspond to low-frequency parts. At > 10 Mc, Fe carbonyl of $2.5 - 3 \mu$ particle diameter and polystyrene are used. For ring- or rod-shaped radiotechnical cores < 1 Mc, ferroplastics are used which are based on: (a) reduced spherical Fe carbonyl and bakelite resin; (b) Fe-Ni powder H-5 (N-5) and bakelite resin. After 24 hr, the cores of (a) molded at 10 tons/cm^2 and room temperature were subjected to a 4-hr treatment. They are suitable for frequencies ≤ 500 kc, for which high Q and magnetic permeability are required. Ferroplastics on the basis of 3.5μ ferromagnetic spheres of an Fe-Ni alloy are used for the production of cores of high permeability. The high initial permeability compensates for the high losses. With respect to quality, they exceed Fe-carbonyl ferroplastics. Ferroplastics of Fe carbonyl, water glass and bakelite resin were the most stable ferromagnetics (stable work at 150°C). There are 7 figures, 9 tables, and 5 references: 3 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: P. R. Bardell, Card 3/5

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Production methods and electromagnetic...

Magnetic materials in the electrical industry, 1956.

Table 1. Electromagnetic parameters of ferroplastics for high-frequency cores of wired apparatus.

Legend: (1) Ferroplastics type; (2) new; (3) old; (4) electromagnetic parameters; (5) initial permeability; (6) hysteresis loss factor for the Rayleigh range; (7) total coefficient of losses caused by eddy currents (Foucault currents) and viscosity; (8) initial hysteresis loss factor; (9) temperature coefficient of magnetic permeability.

Table 1

① Тип ферропласта	④ Электромагнитные параметры				
	⑤ $\mu_{\text{нл}}$	⑥ $\delta_{\text{г.р.}} \cdot 10^3$	⑦ $\delta_{\text{ф.в.}} \cdot 10^3$	⑧ $\delta_{\text{г.в.}} \cdot 10^3$	⑨ $\text{TK}_{\mu} \cdot 10^6$
② Новый	11,3	0,08	0,75	0,14	50
③ Старый	11	0,15	2,5	0,4	80

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Table 2. Electromagnetic parameters of old and new ferroplastics.
Legend: (1 - 3) see Table 1; (4) insulation, %; (5) water glass; (6) bakelite resin; (7) relative quality; (8) effective permeability; ((7) and (8)) were determined by СГТ-2 (SGTs-2) cores at $f = 5$ Mc); (9 - 13) see Table 1 (5 - 9).

Table 2

① Тип ферропла- ста	④ Изоляция, %		⑦ Отн.	⑧ $\mu_{эф.}$	⑨ $\mu_{нл}$	⑩ $\sigma_{г.р.}$	⑪ $\sigma_{ф.в.}$	⑫ $\sigma_{г.н.}$	⑬ $\tau_{Кг.10^5}$
	⑤ жид- кое стекло	⑥ бакелит- овая смола							
② Новый .	0,2	4	2,03	3,02	12,4	0,17	1,8	0,31	85
③ Старый .	—	4	1,88	3,04	12,9	0,20	2,4	0,38	90

Card 5/5

TOLMASSKIY, I.S.; SYRKIN, V.G.; FRIDENBERG, A.E. [deceased]

New type of a magnetodielectric for distance-type communication apparatus.
Elektrósviaz' 17 no.11:59-60 N '63. (MIRA 17:1)

31605
S/048/61/025/012/012/022
B117/B104

18.1140

AUTHORS: Volkov, V. L., Tolmasskiy, I. S., and Fridenberg, A. E.

TITLE: Carbonyl iron powders

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 12, 1961, 1483 - 1486

TEXT: Basing on certain relationships established between the physico-chemical and the electromagnetic properties of carbonyl iron powders, the authors have developed new types of powders: Carbonyl iron powders KЖ (KZh) exhibiting small values of the loss factor (Ref. 3: Otchet organizatsii p/ya 4019, 1959), carbonyl-iron-nickel powders with different nickel contents (Ref. 4: Volkov, V. L. Ivashova, M. V., Tolmasskiy, I. S., Otchet organizatsii p/ya 4019, 1958) and decarbonized carbonyl iron BЖ (VKZh). The examination of the above-mentioned powders has shown that the initial permeability of a KZh-type powder is much smaller than that of powders of the types VKZh, H-5(N-5) and H-50(N-50). This is due to the fact that KZh powders contain considerable carbon and nitrogen

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admixtures (in the form of carbide and ferronitride), and to the nodular structure which prevents the domain boundaries to be displaced under magnetic field action. Magnetic losses increase by decarbonizing carbonyl iron powder. Due to the destruction of the nodular structure, eddy current losses, e. g. occurring in VKZh powders are almost five times and hysteresis losses twelve times those of the corresponding losses of KZh powders. Due to lower conductivity, resulting from the iron being alloyed with nickel, losses of carbonyl iron nickel powders (particularly of the N-50) are much smaller than those of VKZh. Compared with KZh powders, decarbonized powders are characterized by higher temperature coefficients of the initial permeability, because with the admixtures removed the boundaries of the domain are supposed to be displaced easier. Electromagnetic parameters are chiefly determined by their chemical composition and their particle size. It has been shown that hysteresis losses are minimized by reducing the carbon and nitrogen content. Due to a smaller number of particles exhibiting nodular structure, a further removal of admixtures results in an increase in the eddy current and hysteresis losses. A decrease of admixtures in KZh powders as the result of different conditions

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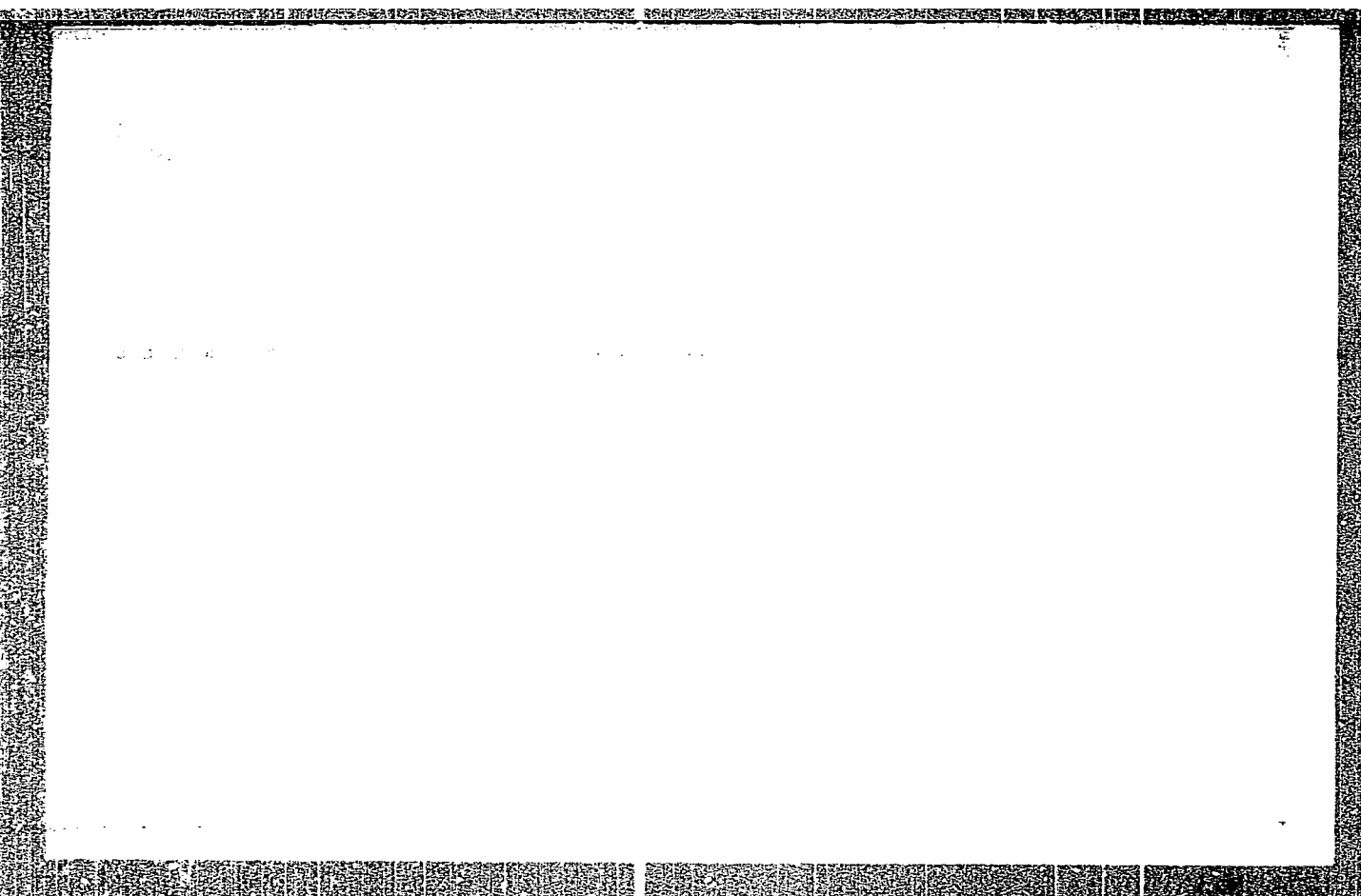
of preparation decreases the temperature coefficient of the initial permeability. An increase in size of the particles of KZh powders, the chemical composition remaining unchanged, leads to an increase in hysteresis and eddy current losses and of the temperature coefficient of initial permeability. The frequency dependence of the magnetic loss angle tangent found in this way, apparently confirms the presence of magnetic viscosity in carbonyl iron, due to admixtures. There are 2 figures, 3 tables, and 8 references: 6 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: Richards, C. E., Post. office Eng. Res. Station, 1952.

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"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001756110015-4



APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001756110015-4"

9,2000 (1001, 1158, 1385)
15.8300 3108, 2209

32359
S/191/62/000/001/003/006
B145/B110

AUTHORS: Tolmasskiy, I. S., Fridenberg, A. E.

TITLE: Some technological factors determining the quality of ferroplastics on the basis of carbonyl iron

PERIODICAL: Plasticheskiye massy, no. 1, 1962, 14-19

TEXT: Since the properties of ferroplastics depend not only on the properties of the ferromagnetics used, but also on the manner of their production, the effect of technological factors of production on the electromagnetic parameters of the ferroplastics was investigated. Carbonyl-iron powders $P(R)$ (radiotechnical) and $\Pi(P)$ (for telecommunication apparatus) were used for the investigation. The properties of ferroplastics, the use of which is envisaged within the range of radio waves, were determined by measuring the relative sharpness of resonance of the coils, the inductance and effective permeability. The loss factor and the initial permeability were determined for cores made of ferroplastics, used for the manufacture of telecommunication apparatus. When selecting dielectrics, attention must be paid to their electrophysical properties as

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S/191/62/000/001/003/006
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well as to their adhesiveness to iron. The formulas are worked out according to the application of the ferroplastic and the electromagnetic properties required. For ferroplastics used above 5 Mc/sec, double insulation is recommended (0.2% water glass and 4% Bakelite resin related to the weight of the powder). For ferroplastics used in telecommunication apparatus, the correctness of the methods and formulas applied so far was confirmed (1% water glass and 5.5% Bakelite resin). The effect of the molding pressure on the stability of ferroplastics was investigated, and the optimum pressure was found to be 6 tons/cm² for radiotechnical cores, and 10 tons/cm² for telecommunication apparatus. The effect of thermal treatment was also investigated. Double insulation ensures high thermal stability of ferroplastics of class R subjected to 150°C for 400 hr. There are 5 figures, 5 tables, and 4 references: 3 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: P. R. Bardell, Magnetic materials in the electrical industry, 1956, London.

Card 2/2

S/144/61/000/006/001/004
D207/D308

9.4300

AUTHOR:

Tolmasskiy, I.S., Engineer

TITLE:

Permeability and losses of magnetodielectrics based
on carbonyl iron powder

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Elektro-
mekhanika, no. 6, 1961, 3-18

TEXT: The author considers theoretical bases for creating new types of magnetodielectrics with high permeability and low values of losses. The theoretical part is a compilation from several books and papers; in particular, K.M. Polivanov's theory of losses (Ref. 9: Izv. AN SSSR, seriya fiz. 1959, vol. 23, no. 3) is described and compared with H. Jordan's theory (Ref. 7: Elektr. Nachr. Techn. 1 (7), 1924). Experimental part: Three types of carbonyl iron powder, with different chemical composition and structure, were investigated. Toroidal cores were prepared, with polystyrene as binding substance, by hot pressing at 120°-140°C and 2 to 4 tons/cm². The dependence of initial permeability of the cores on concentration of the ferromagnetic base is shown graphically. To obtain the

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JB

Permeability and losses...

dependence of initial permeability of the cores on preparation pressure, three types of cores were prepared: 1) Base: primary carbonyl iron, isolated with 1% of water glass and 5% of bakelite resin (weight percent); 2) Reduced carbonyl iron, isolated with 0.8% of water glass (weight percent); 3) Reduced iron-nickel powder N-5, isolated with 0.5% of water and 4% of bakelite resin (weight percent). Dependence of permeability on preparation pressure is also given graphically. Losses were studied at frequencies up to 3000 kilocycles, on carbonyl powders with a chemical composition similar to those already mentioned. Toroidal and cylindrical cores were prepared by hot and cold pressing. Results of measurements were estimated according to Jordan's method, and an additional interpretation was made according to Polivanov's recommendations (Ref. 9: Op. cit.). Comparison is given. The dependence of $\text{tg } \delta$ [Abstractor's note: δ not defined] on frequency for different chemical composition of powders is represented graphically as is the dependence of electromagnetic parameters and coefficients of losses on dispersity. It is claimed that the results are in good agreement with Polivanov's theory. There 7 figures, 7 tables and 13 references, 4 Soviet-bloc and 9 non-Soviet-bloc. The references

Card 2/3

Permeability and losses...

S/144/61/000/006/001/004
D207/D306

to English-language publications read as follows: P. Cioffi, Nature 126,
200, 1930; C.E. Richards, Post Office Eng. Res. Station, 1952; W.B.
Elwood, V.E. Legg, Journ. Appl. Phys. 8, 351, 1937; J.L. Snoek, Physica 8,
711, 1939.

SUBMITTED: November 15, 1960

/B

Card 3/3

TOLMAZIN, D.M.

Current field and water exchange in the Bosporous. Okeanologiya
2 no.1:44-50 '62. (MIRA 15:2)

1. Odesskaya biologicheskaya stantsiya Instituta gidrobiologii
AN USSR.

(Bosporous--Ocean currents)

TOLMAZIN, D.M.

Location of the surface of no motion in the ocean. Okeanologiya
2 no.5:815-821 '62. (MIRA 15:11)

1. Odesskaya biologicheskaya stantsiya Instituta gidrobiologii
AN USSR.

(Ocean currents)

TOLMAZIN, D.M.

Wind tides in the northwestern part of the Black Sea. Okeanologiya
3 no.5:848-852 '63. (MIRA 16:11)

1. Odesskaya biologicheskaya stantsiya Instituta gidrobiologii
AN UkrSSR.

HOL'SHAKOV, B. S.; TOLMAZIN, D. M.; ROZENGURT, M.Sh.

Horizontal circulation in the Black Sea. Izv. AN SSSR. Ser.
geofiz. no.6:924-929 Je '64. (MIRA 17:7)

1. Institut gidrobiologii AN UkrSSSR i Odesskaya biologicheskaya
stantsiya.

TOIM-LIN, H.M.

Theory of tidal currents. Dokl. AN USSR 159 no.1:77-80
N 164. (MIRA 17-22)

I. Odesskoye obshchestvo Instituta biologii yuzhnykh moryey
AN UkrSSR. Predstavleno akademikom V.V. Shuleykinym.

BOL'SHAKOV, V.S.; ROZENGURT, M.Sh. [Rozenhurt, M.Sh.]; BALINSKAYA, N.S.
[Balyne'ka, N.S.]; TOLMAZIN, D.M.

Characteristics of water masses in the northwestern part of the
Black Sea. Nauk.zap.Od.biol.sta. no.5:81-99 '64.

(MIRA 18:1)

TOLMAZIN, D.M.; ROZENGURT, M.Sh.

Abyssal horizontal and vertical movements of the waters of the
Black Sea. Okeanologiya 5 no.5:849-853 '65.

(MIRA 18:11)

1. Odesskoye otdeleniye Instituta biologii yuzhnykh morey
AN SSSR.

TOLMAZIN, D.M.

Current in a shallow strait of variable cross section. Trudy
GOIN no.85:18-23 '65.

Nonlinear models of water movement in a shallow strait. Ibid.:
24-34 (MIRA 19:1)

L 35996-66 EWT(1) GW
ACC NR: ATE016536 (N)

SOURCE CODE: UR/2634/65/000/085/0018/0023

AUTHOR: Tolmazin, D. M.

ORG: None

TITLE: Currents in shallow straits of variable cross section

SOURCE: Moscow, Gosudarstvennyy okeanograficheskiy institut. Trudy, no. 85, 1965. Teoriya i metody raschetov techeniy i neperiodicheskikh kolebaniy urovnya i prilivov (Theory and methods of calculating currents and acyclic fluctuations of water level and tides), 18-23

TOPIC TAGS: ocean current, ocean dynamics, wind, fluid flow

ABSTRACT: This article describes a theoretical investigation of shallow straits of realistic shape. The currents are due to averaged winds and differences in levels at the input. The paper presents derivations from hydrodynamic equations of analytical expressions for flow rate and the location of surface levels along the straits. The theoretical solution presented constitutes the basis for the development by the State Oceanographic Institute (Gosudarstvennyy okeanograficheskiy institut) of a method for the calculation of water transfer in the Kerch Strait. The earlier calculations of the water transfer through the Strait

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L 35996-66
ACC NR: AT6016536

narrowed by a dike, carried out in 1939-40 by V. A. Langvagen using the V. M. Makkaveyev theory (V. M. Makkaveyev, I. M. Konovalov, Gidravlika, Rechizdat, M., 1940) could not be utilized because of numerous insufficiently justified assumptions introduced by Langvagen into the calculations. The author thanks B. L. Lagutin, Candidate of Technical Sciences, for his help in carrying out the work. Orig. art. has: 19 formulas.

SUB CODE: 08, 20/ SUBM DATE: 00/ ORIG REF: 011/ OTH REF: 002

Card 2/2 *lll*

L 35995-66 EWT(1) - ~~GW~~ (N)

ACC NR: AT6016537

SOURCE CODE: UR/2634/65/000/085/0024/0034

AUTHOR: Tolmazin, D. M.

ORG: None

TITLE: Nonlinear models for water flow through shallow straits

SOURCE: Moscow. Gosudarstvennyy okeanograficheskiy institut. Trudy, no. 85, 1965. Teoriya i metody raschetov techeniy i neperiodicheskikh kolebaniy urovnya i prilivov (Theory and methods of calculating current and acyclic fluctuations of water level and tides), 24-34

TOPIC TAGS: ocean dynamics, ocean current, fluid flow, flow rate, steady flow

ABSTRACT: The characteristics of the currents and the water level in shallow straits containing water of constant density is mainly determined by the effects related to the variations in the width of the strait. The author proposes the use of the approximate method due to M. Ye. Shvets (PMM, vol. 13, no. 3, 1949) for the solution of the general flow equation. An analysis of the constant depth straits model shows that the vertical advective term is small compared to the corresponding horizontal term. For the calculation of the level and rate of flow,

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I 35995-66
ACC NR: AT6016537

averaged over the cross section of the strait, the author utilizes the model of steady flow developed by W. Hansen (Tellus, vo. 8, no. 3, 1956). The newly derived theoretical expressions will be used for the calculation of the flow through unrestricted and partially blocked Kerch Strait. Orig. art. has: 49 formulas, 3 figures, and 1 table.

SUB CODE: 08/ SUBM DATE: 00/ ORIG REF: 012/ OTH REF: 003

Card 2/2 *ll*

LAGUTIN, B.L., kand.tekhn.nauk; TOLMAZIN, D.M.

Theoretical solution of the problem of artificial regulation of
the exchange of waters through the Kerch Strait. Meteor. i gidrol.
no.4:18-21 Ap '65. (MIRA 18:4)

1. Gosudarstvennyy okeanograficheskiy Institut.

L 45331-66 ENT(1) GW

ACC NR: AP6024329 (N) SOURCE CODE: UR/0021/66/000/004/0460/0462

AUTHOR: Bol'shakov, V. S.; Bezfamil'na, R. M. -- Bezfamil'naya, R. M.;
Rozenhurt, M. Sh. -- Rozengurt, M. Sh.; Tolmazin, D. M.

ORG: Odessa Branch of the Institute of Biology of the Southern Seas, AN URSR
(Odés'ke Viddilen ya Instytutu biologiyi pivdennykh moriv AN URSR)

TITLE: Water circulation in the central part of the Black Sea

SOURCE: AN UkrRSR. Dopovidi, no. 4, 1966, 460-462

TOPIC TAGS: ocean dynamics, ocean current, oceanography, water surface/
BLACK SEA

ABSTRACT: The paper deals with the dynamics of currents in the central part of the Black Sea. By means of a special oceanographic survey, the authors studied the character of the surface and deep currents and calculated the coefficient of vertical turbulent diffusion at different water levels. The results of investigations are presented in the original source. The calculations confirm the existence of

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L 45331-56

ACC NR: AP6024329

meridional transport in the bulk of water in the central part of the Black Sea. The original paper was presented by V. V. Shulyeykin (V. V. Shuleykin), Member of the Academy of Sciences SSSR. Orig. art. has: 2 figures, 1 table, and 3 formulas. [Based on authors' abstract] [KP]

SUB CODE: 08/ SUBM DATE: 19Dec64/ ORIG REF: 009/ OTH REF: 002/

Card 2/2 *LC*

PETROVA, A.A.; TSVETKOVA, Ye.V.; FRIDENBERG, A.E.; TOIMASSKIY, I.S.

Electron microscopy of the secondary structure of iron
carbonyl. Zhur. fiz. khim. 36 no.3:613-615 Mr '62.
(MIRA 17:8)

TSVIRKO, Yu.A.; TOLMAZINA, M.A.

Boundary conditions for electromagnetic waves on the surface of
optically active crystals. Fiz.tver.tela 3 no.5:1393-1399 My '61.
(MIRA 14:6)

1. Odesskiy gosudarstvennyy universitet imeni I.I.Mechnikova.
(Electromagnetic waves) (Crystals—Optical properties)

24.7100 (1136, 1142, 1160)
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AUTHORS: Tsvirko, Yu. A., and Tolmazina, M. A.

TITLE: Boundary conditions for electromagnetic waves on the surface of optically active crystals

PERIODICAL: Fizika tverdogo tela, v. 3, no. 5, 1961, 1393 - 1399

TEXT: A system of equations was set up by Professor S. I. Pekar (ZhETF, 33, 1022, 1957; *ibid.*, 34, 1176, 1958) for the calculation of the amplitudes of normal and anomalous electromagnetic waves in crystals. Starting from these equations the present paper investigates the propagation of electromagnetic waves along the principal optic axis of a uniaxial optically active crystal and deals with the determination of the additional boundary conditions on the assumption that the excitation of the crystal is due to Frenkel excitons. The crystal possesses a $D_4^{(3)}$ symmetry with a screw axis of the 4th order $C_{4.00-\frac{1}{4}}$ (chosen as the z-axis). The wave functions of the excited states are given by:

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